

## TWO NEW SPECIES AND A REVISED KEY TO GENUS *NEODIPLOCONUS* HYSLOP (COLEOPTERA, ELATERIDAE: MELANOTINAE) FROM INDIA<sup>1</sup>

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(With eleven text-figures)

To the previously recorded four species of genus *Neodiploconus* Candeze from India, two new species have been added. The new species described and illustrated are *N. dirangensis* and *N. neeraae*. A key for identification of all Indian species of this genus is provided.

### INTRODUCTION

Candeze (1860) erected the genus *Diploconus* based on eleven species. Because this name was preoccupied, Hyslop (1921) renamed it as *Neodiploconus* which was treated by Schenkling (1927) in the *Coleopterorum catalogus* as such. So far only four species of this genus were known from the Indian subcontinent, and all have been described under the genus *Diploconus* Candeze, i.e. three species by Candeze (1860, 1891, 1896) and one by Fleutiaux (1902). In the present paper two new species have been described and illustrated providing complete distributional data and population variation (if any). A dichotomous key for the Indian species is given. Holotypes of new species will be deposited at the Indian Agricultural Research Institute, Pusa National Collections, Division of Entomology, New Delhi.

### KEY TO INDIAN SPECIES OF *Neodiploconus* HYSLOP

1. Body unicoloured; pronotum with median tubercle at its posterior border. .... 2
- Body bicoloured; pronotum simple ..... 3
2. Legs black; pronotal punctation very fine .....  
..... *nigerrimus* (Fleutiaux, 1902)
- Legs ferruginous; pronotal punctation very large .....  
..... *coracinus* (Candeze, 1860)
3. Elytra black; pronotum mainly red ..... 4
- Elytra red with brownish margins; pronotum black .....  
..... *ornatus* (Candeze, 1891)
4. Elytra truncate at extremity; pronotum with one small, black median spot ..... *brevis* (Candeze, 1896)

- Elytra rounded at extremity; pronotum with three median spots ..... 5
- 5. Pronotum with small, median, almost rounded spot one each on lateral sides, confluent with broad median spot covering most of dorsal surface (Figs. 1,2); antenna extending beyond posterior angle of prothorax, segment 3 longer than 2 as 3:2; posterior angle with a tuft of setae .....  
..... *dirangensis* sp.nov.
- Pronotum with small, median, almost rounded spots one each on lateral sides and another on dorsal surface (Fig. 3); antenna not reaching posterior angle of prothorax, segment 3 equal to 2; posterior angle without a tuft of setae .....  
..... *neeraae* sp. nov.

### *Neodiploconus dirangensis* sp. nov.

(Figs. 1, 2, 4, 6, 7, 9, 11)

**Description:** *Colour:* Body black, alizarine are: lateral one fourth of pronotum except median, almost rounded spot and pronotal angles (Figs. 1, 2); propleurae entire; all sternites entire. Antenna black. Legs piceous.

**Measurements:** *Body:* Length 9.5 mm, width 1.75 mm; head: length 0.75 mm, width 1.25 mm; antenna 3.5 mm; thorax: length 2 mm, width 1.75 mm; elytra 6.5 mm.

**Structure:** Body width less than 0.25 x its length. Head flat, broader than long as 5:3; frons with anterior margin rounded, supra-antennary crest transverse (Fig. 9). Antenna serrate (Fig. 7), extending beyond posterior angle of prothorax; segment 3 longer than 2 as 3:2 but distinctly shorter than 4 as 4:9. Pronotum subconvex with faint medial longitudinal depression in its posterior 1/3, longer than broad as 8:7, gradually narrowing anteriorly, bicarinate, carinae short, not reaching middle of prothorax; posterior angles rounded, with a tuft of

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setae (Fig. 1). Prosternal spine pointed, not margined, gradually narrowing at base, inclined at  $30^\circ$  from its main axis. Scutellum flat, longer than broad as 5:3, anterior and posterior margins rounded, lateral sides constricted anteriorly (Fig. 4). Elytra flat, 3.25x prothorax length, rounded at extremity (Fig. 11); striae distinct. Metabasitarsus equal to following 2 joints combined.

**Sculpture:** Head with simple, dense, moderate, rounded punctation; pronotum with simple, sparse, small, rounded punctation; propleurae punctated like pronotum; prosternum with simple, sparse, small, rounded punctation; elytral striae with deep, distinct, rounded punctation; interstriae with shallow, scattered punctation.

**Pubescence:** Body covered with simple, dense, erect, blackish pubescence.

**Male genitalia:** Fig. 6. Phallobase with two anterolateral processes, anterior margin arcuate. Parameres simple, with subapical processes. Aedeagus longer than parameres, tubular and ending into nipple-like apex: furcae long, extending well beyond anterior limits of parameres.

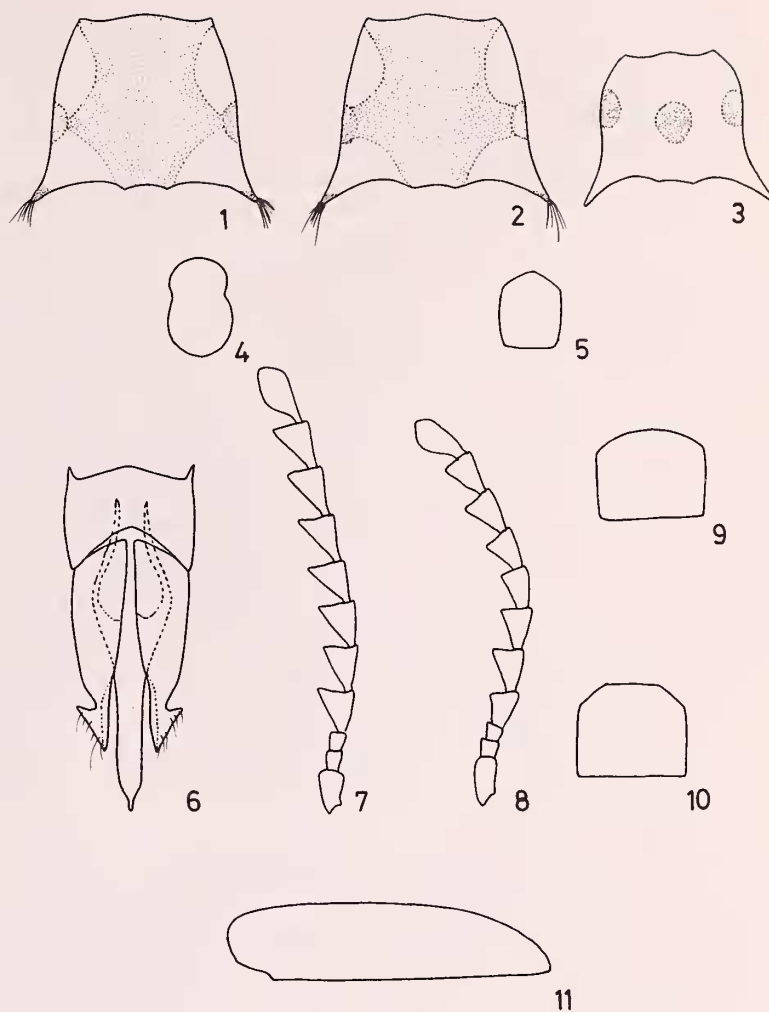
**Material examined.** *Holotype:* Male, Arunachal Pradesh, Dirang, 1500 m, 10.5.1992. *Paratypes:* 3 males, 1 female, with same data as holotype.

**Distribution.** INDIA: Arunachal Pradesh.

**Population variation:** Lateral medial black spot may be narrowly to broadly confluent with broad medial black spot (Fig. 2).

**Diagnostic characters:** On the basis of some broad key characters such as: bicoloured body; black elytra with rounded extremities and bicoloured, simple pronotum, *N. dirangensis* remains distinctly separated from all the Indian species of this genus but comes close to *N. neeraae* from which it differs in pronotum having large blackish dorsal surface (small spot in latter), antenna extending beyond posterior angle of prothorax (not reaching posterior angle in latter), segment 3 longer than 2 (equal in latter) and posterior angle with a tuft of setae (without setae in latter).

**Etymology:** Species name pertains to its type locality.



Figs. 1-3. Pronotum: 1. *Neodiploconus dirangensis*, 2. *N. dirangensis* (Population variation), 3. *N. neeraae*; Figs. 4-5. Scutellum: 4. *N. dirangensis*, 5. *N. neeraae*; Fig. 6. Male genitalia of *N. dirangensis*; Figs. 7-8. Antenna: 7. *N. dirangensis*, 8. *N. neeraae*; Figs. 9-10. Head: 9. *N. dirangensis*, 10. *N. neeraae*; Fig. 11. Elytra of *N. dirangensis*.

***Neodiploconus neeraae* sp. nov.**  
(Figs. 3,5,8,10)

**Description:** *Colour:* Body black, alizarine are: pronotum (Fig. 3) except three small, medial spots (one each on lateral side and one on dorsal surface); propleurae; mesosternum; mesosternal plate; and all sternites except posterior half of apical one. Antenna black. Legs piceous.

**Measurements:** *Body:* Length 10.5 mm, width 2.5 mm; *head* length 0.75 mm, width 1 mm; *antenna* 3 mm; *thorax* length 2.25 mm, width 2.5 mm; *elytra* 7 mm.

**Structure:** Body width less than 0.25 x its

length. Head flat, broader than long as 4:3; frons with complete carina, anterior margin truncate, supra-antennary crest oblique (Fig. 10). Antenna subserrate (Fig. 8), not reaching posterior angle of prothorax; segment 3 equal to 2 but distinctly shorter than 4 as 2:3. Pronotum convex with a distinct median longitudinal furrow in its posterior 1/3, broader than long as 9:8, gradually narrowing anteriorly, bicarinate, carinae short, not reaching middle of prothorax; posterior angles rounded, diverging, without tuft of setae; prosternal spine pointed, not margined, gradually narrowing between mesocoxae, descending at 30° from its main axis. Scutellum flat, longer than broad as 5:3, anterior margin arcuate, posterior margin truncate, lateral sides straight and parallel (Fig. 5). Elytra flat, 3.1 x prothorax length, rounded at extremity; striae distinct. Metabasitarsus equal to following 2 joints combined.

**Sculpture:** Head with simple, dense, moderate, rounded punctation; pronotum with simple, sparse, minute, rounded punctation;

propleurae and prosternum punctated like pronotum; elytral striae with deep, distinct, rounded punctation, interstriae with shallow, scattered fine punctation.

**Pubescence:** Body covered with simple, moderate, erect, blackish pubescence.

MALE: Not found.

**Material examined:** *Holotype:* Female, Uttar Pradesh, Fata (Sonprayag), 2000 m, 13.6.1994.

**Population variation:** Single specimen examined.

**Distribution:** INDIA: Uttar Pradesh.

**Diagnostic characters:** The characters differentiating *N. neerae* from *N. dirangensis* have already been indicated elsewhere in this paper.

**Etymology:** Species name is after its collector, Dr. Neera Raghav.

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#### REFERENCES

- CANDEZE, E. (1860): Monographie des Elaterides III. *Mem. Soc. R. Sci. Liege* 15: 1-512.
- CANDEZE, E. (1891): Elaterides recueillis en Birmanie en 1888 par M.L. Fea. *Ann. Soc. Civ. Stor. nat. G. Doria, Genova*, 10: 771-793.
- CANDEZE, E. (1896): Elaterides nouveaux, VI. *Mem. Soc. R. Sci. Liege*, 19(2): 1-88.
- FLEUTIAUX, E. (1902): Contribution a la faune indo-chinoise. 18 mem. Deuxieme addition aux Cicindelidae et Elateridae. *Ann. Soc. ent. Fr.*, 71: 569-580.
- HYSLOP, J.A. (1921): Genotypes of the elaterid beetles of the World. *Proc. U. S. nat. Mus.*, 58: 621-680.
- SHENKLING, S. (1927): Coleopterorum Catalogus, Elateridae II. W. Junk, Berlin 88: 265-636.

### A NEW SPECIES OF *DILOPHILA* THOMS. (BRASSICACEAE) FROM GARHWAL HIMALAYA (INDIA)<sup>1</sup>

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(With a text-figure)

During recent plant explorations near the snow-line in the alpine zones of Garhwal Himalaya (Northwest Himalaya), a few specimens of Brassicaceae were collected from Roopkund area (4850 m a.s.l.). After checking the literature these were identified as of a new species of the genus

*Dilophila* Thom. which is named after Prof. V. Puri.

#### *Dilophila purii* sp. nov.

(Fig. 1 A-M)

Herbae parvae perennes, acaulescentes, cum caudice longo. Caudex supra ramosis, unusquisque ramus rosulam foliorum terminalem ferens. Folia spathulata, longe petiolata, 6.0-12.0 x 2.0-4.0 mm, succulentia. Scapus uniflorus, manifeste oriens e

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